CONTENTS OF *Animal Reproduction Science*, VOLUME 18

VOL. 18 NOS. 1–3 FEBRUARY 1989

Studies on increasing breeding frequency in the ewe. I. The fertilization of ova during the early post-partum period
W.A.C. McKelvey, J.M. Wallace, J.J. Robinson and R.P. Aitken (Aberdeen, Great Britain) 1

The effect of frequency of administration of melatonin on the time of onset of the breeding season in anoestrous ewes
E. Ronayne, B. Jordan (Dublin, Ireland), J.F. Quirke (Ingelheim am Rhein, F.R.G.) and J.F. Roche (Dublin, Ireland) 13

Factors related to decreased testosterone concentrations in the peripheral circulation of the maturing male chicken (*Gallus domesticus*) fed aflatoxin
R.N. Clarke and M.A. Ottinger (College Park, MD, U.S.A.) 25

Timed breeding of rabbits with fresh and frozen-thawed semen and evidencew of acrosome alteration following freezing and thawing
Y. Chen, X. Yang and R.H. Foote (Ithaca, NY, U.S.A.) 35

Testosterone concentrations in normal and cryptorchid horses. Response to human chorionic gonadotrophin
J.E. Cox (Neston, Great Britain) 43

Involvement of hypothalamic compounds in the expression of estrus in the pig
K.L. Esbenshade and B.G. Huff (Raleigh, NC, U.S.A.) 51

Prolactin secretion after hypophysial stalk transection in prepuberal beef heifers
A.M. Benoit, J.R. Molina, D.L. Hard and L.L. Anderson (Ames, IA, U.S.A.) 61

Plasma prolactin concentrations in barren, pregnant and lactating red deer (*Cervus elaphus*) given melatonin to advance the next breeding season
C.L. Adam, C.E. Moir and P. Shiach (Aberdeen, Great Britain) 77

Absence of high-affinity binding sites for prolactin on the bovine corpus luteum
M.M. Bevers, J.A. Russcher and S.J. Dieleman (Utrecht, The Netherlands) 87

Testing capacitation of bull sperm with zona-free hamster ova
K. Schellander, B.G. Brackett, C.L. Keefer and R.A. Fayrer-Hosken (Athens, GA, U.S.A.) 95

Effect of age at hemicastration on the body and testis weight of piglets
G.I. Onuora and B.C.O. Omeke (Nsukka, Nigeria) 105

Pituitary and ovarian responses to prolonged administration of low doses of GnRH in prepubertal heifers
Judith P. Jagger, A.R. Peters, B.J. McLeod and G.E. Lamming (Loughborough, Great Britain) 111

Mouse embryo development in media containing growth factors
A.R. Menino, Jr., J.S. Williams, C.S. Gardiner and T.L. John (Corvallis, OR, U.S.A.) 125

Development to the late morula or blastocyst stage following in vitro maturation and fertilization of bovine oocytes
Y. Fukui, M. Urakawa, C. Sasaki, N. Chikamatsu and H. Ono (Obihiro, Japan) 139

The ovulation rate after unilateral ovariectomy in the Booroola Merino ewe
R.C. Fry (Werribee, Australia), B.M. Bindon, L.R. Piper (Armidale, Australia) and L.P. Cahill (Werribee, Australia) 149

A note on fertility of cyclic beef females following acute unilateral ovariectomy
G.L. Williams and D.W. Forrest (Beeville, TX, U.S.A.) 155
Penetration of cervical mucus and other body fluids by bull sperm in capillary tubes
J. Matoušek, J. Říha (Rapotin, Czechoslovakia), V. Sršeň, L. Veselský and F. Louda (Prague, Czechoslovakia) 161
Puberty in heifers: a review
C. Moran, J.F. Quirke and J.F. Roche (Ballsbridge, Ireland) 167
Changes in electrical resistance of vulvar tissue in Holstein cows during ovarian cycles and after treatment with prostaglandin $F_{2\alpha}$
G.S. Lewis (Beltsville, MD, U.S.A.), E. Aizinbud and A.R. Lehrer (Bet Dagan, Israel) 183
Preliminary study on treatment of ringwomb in Iraqi goats
A.F. Majeed and M.B. Taha (Mosul, Iraq) 199
Evaluation of progesterone controlled internal drug release dispensers for synchronization of estrus in sheep
Kristin M. Carlson, Holly A. Pohl, J.M. Marcek (St. Paul, MN, U.S.A.), R.K. Muser (North Somerville, NJ, U.S.A.) and J.E. Wheaton (St. Paul, MN, U.S.A.) 205
Comparison of progesterone sponges, Cronolone sponges and controlled internal drug release dispensers on fertility in anestrous ewes
Amera H. Hamra, Janet W. McNally (Pine City, MN, U.S.A.), J.M. Marcek, Kristin M. Carlson and J.E. Wheaton (St. Paul, MN, U.S.A.) 219

VOL. 18 NO. 4 MARCH 1989

Follicular growth and endocrine patterns of prepuberal heifers administered bovine follicular fluid and (or) follicle stimulating hormone
M.T. Moser, H.A. Garverick, M.F. Smith and R.S. Youngquist (Columbia, MO, U.S.A.). 227
Factors influencing pregnancy rate and calving date in four breeds of beef cows on an Ozark mountain range
B.J. Buddenberg, C.J. Brown, H.P. Peterson and A.H. Brown (Fayetteville, AR, U.S.A.) 243
Effects of pregnancy and exogenous progesterone on immunosuppressive activity in the uterus and peripheral plasma of the ewe
X. Zhang and B.G. Miller (Camden, N.S.W., Australia) 253
Studies on increasing breeding frequency in the ewe. 2. The endocrine status of lactating ewes induced to ovulate 28, 35 or 42 days post-partum
J.M. Wallace, J.J. Robinson, W.A.C. McKelvey and R.P. Aitken (Aberdeen, Great Britain) 271
Acquired resistance to cold shock in ram spermatozoa revealed by microscopy and a calcium radioassay
L. Robertson, J.M. Plummer and P.F. Watson (London, Great Britain) 285
The effect of limiting the number of days of contact with boars, season and herd of origin on the attainment of puberty in gilts
A.M. Paterson (South Perth, W.A., Australia), P.E. Hughes (Northam, W.A., Australia) and G.P. Pearce (Nedlands, W.A., Australia) 293

Book Reviews
Temperature and animal cells 303
Proceedings of the International Embryo Movement Symposium 304
Announcement 305

Author index 307

Subject index 310

Contents of *Animal Reproduction Science*, Volume 18 315